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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 1 1929

REPORT FOR THE WEEK ENDING JUNE 1, 1929.

PENDLETON:

The well bid and well equipment housing were completed this week. The winter wheat is making a fine growth, in places in the field the wheat is waist high. The spring barleys are beginning to head, they are only about one foot tall. On June 1 we had one-half inch rain, the first rain of any value since early February. The wheat crop in this Indian reservation section will be good. The wheat yields in the other districts of Eastern Oregon and Washington will be very low unless good soaking rains are received within the next week or ten days.

Mr. J. Stanley Brode, biology teacher in the Pendleton High School and his three classes in biology visited the station on May 31.

Maximum temperature 75; minimum 33; precipitation .50 inch.

HAVRE:

Conditions during the past week have been mediumly favorable for plant growth. Rain on Sunday night and Monday, falling very slowly, amounted to .50 inch. Since that time temperatures have generally been a little below normal, the sky has been cloudy part of the time, with occasional short periods of rather warm weather.

Grains that are just coming up are yellow while the early seeding shows good color.

During the past 24 hours there has been a very strong east wind which has averaged 18.6 miles per hour. This is about as high an average as has been recorded since the station started.

Maximum temperature 80; minimum 36; precipitation .50 inch.

JUDITH BASIN:

Weather has been cool and cloudy with a good rain the fore part of the week. The readily available soil moisture was becoming quite badly depleted when a rain containing 1.35 inches of moisture occurred on the 27th, followed by two other smaller showers during the week, bringing the aggregate for the week up to 1.75 inches. The latter part of the week was warmer and the beneficial effects of the moisture received was noticeable.

Practically all spring seeding in the Basin has been completed and crops seeded prior to this week are up with good stands.

Plowing for summer fallow was completed in field A. The potato strain and variety tests were seeded during the latter part of the week.

Forage crops have made marked advancement during the week. The pasture experiments with dairy cows were started in the experimental lots.

Trees in the shelterbelt are leafing out. Early varieties are in full leaf and the Caragana in bloom. Some work was done during the last of the week in weeding the conifer test blocks.

Station visitors during the week included a group of Russian agriculturalists who are studying big scale farming conditions in Montana.

Maximum temperature 77; minimum 32; precipitation 1.75 inches.

HUNTLEY:

Good growing weather has prevailed throughout the week, although an abrupt drop in temperature to 30 degrees on the morning of the 28th caused a little injury to corn plants just coming through the ground.

HUNTLEY, continued:

Showers totalling .43 inch fell during the four days May 25 to 28 inclusive and gave slight relief from the drought of the past month. Precipitation for May was .50 inch as compared to the normal of 2.29 inches. As the rainfall for April was also considerably less than the average crops have had to draw heavily upon the small amount of moisture accumulated in the soil since harvest.

Stand of all grains are thin and many of the plots are becoming weedy in the open spaces. Corn is coming up slowly. Stands on fall plowed land are heavier than on spring plowing to date. On the latter plots the border rows and low spots are the only places showing anything like a full stand. This would indicate that the seed beds are still too dry to sprout the seed uniformly.

Field work has been devoted to the control of weeds. All roads were again duckfooted and harrowed and alleys have been cultivated and hoed.

Maximum temperature 82; minimum 30; precipitation .43 inch.

SHERIDAN:

Heavy rain the first of the week and another half inch of rain the evening of the 28th prevented any field work until Friday. While the field work was being held up, a large proportion of the corner, end, and brace posts for the pasture fences were set. Seeding of Sudan grass and sorgo was completed yesterday and to-day, and some odd pieces of ground were seeded to brome-grass while the surface of the ground was in good condition for such seeding.

All crops made a fast growth. Winter rye is beginning to head. Weeds also are making a good start. The corn seeded last week began to emerge the last couple days.

Maximum temperature 82; minimum 36; precipitation 1.64 inches.

DICKINSON:

Rainfall for May amounted to 3.48 inches, most of which fell during last week. The precipitation for the year amounts to 8.41 inches, or 3 inches above the normal. Cold weather during May retarded all vegetation. The mean temperature for the month was 47.8 degrees or 4.4 dgrees below the mean temperature for the month, and 10.6 degrees colder than May, 1928.

Corn on the rotations, planted May 16, is emerging.

Several varieties of plums were in full bloom during the week. Most varieties have a heavy set of blossoms and the varieties which bloom earliest appear to have a good set of fruit. Less winter killing is apparent than in most springs. Two out of six trees of Japanese plum have failed to leaf out and the Opata variety is opening up very slowly. The Sapa variety came through with very little injury although in most recent winters it has been injured severely.

Alfalfa and all other forage crops came through with practically no loss. A block of winter wheat seeded on fallow at three different dates with both furrow and common drills was cultivated and seeded to Linota flax. The stand on no plot was as good as 25 per cent and the earliest seeding was almost a complete failure. None of the winter wheat or rye on the station has survived with a fair stand. Five varieties of alfalfa were seeded on May 28. Brome-grass, Crested wheat grass and Slender wheat grass were seeded on June 1.

An increase patch of Cobbler potatoes was seeded on May 31.

Maximum temperature 68; minimum 37; precipitation 2.85 inches.

MANDAN:

Agronomy

Field work was delayed during the past week because of rain. Good rains came during two different periods.

MANDAN, continued:

Agronomy, continued.

The weather still remains cool for this time of the year. Small grains are growing slowly, but look good. Winter rye is starting to head out. Corn is all up to a good stand. Millet varieties were seeded during the week for the Office of Forage Crops. Plowing for fallow will be completed in the Main field to-day. Weeds are making a good start, but the Russian thistle is not nearly as bad as last year.

The total precipitation for May was 2.68 inches, or about one-quarter of an inch above normal. The total for the year to May 31, inclusive, is 7.01 inches, or over an inch above normal.

Maximum temperature 79; minimum 44;
Precipitation 1.61 inches.

Cooperative Grazing Experiment

The cattle on pasture completed the first 15 days of the season at the end of May. The vegetation has been slow in getting started this spring, because of the cool weather. The smaller pastures are very poor for this time of year, and their condition nearly equals the poor condition of last spring. The division in the rotation pasture was also short. The gains in the following table reflect the condition of the pastures.

Pasture (acres)	No. steers	15 days Gain per head (lbs)
100	10	62.5
70	10	61.0
50	10	39.0
30	10	13.0
Rot. (70)	14	45.0
Brome-grass (25)	8	64.4
Sw. Clover (10)*	4	72.5

* This pasture has nearly gone back to brome-grass. It contains very little 2-year-old sweet clover, but many seedlings.

MANDAN, continued:

Arboriculture

Dead wood has been removed from the main windbreak. The boxelder row in the north belt has killed completely to the ground, and has been taken out. The land will be fallowed this summer and replanted next spring. Considerable breakage by wind of Chinese elm has taken place during the past month throughout the shelterbelt.

Land has been broken for a new heeling-in bed, east of the present location. Several furrows have been plowed north of the shelterbelt combinations, to prevent damage by fire and to keep out sod.

Hoeing has commenced in the main conifer windbreak. The rains of the week have greatly benefited all nursery stock.

Horticulture

Bedding plants such as cannas, geranuims, coleus, etc., were set out on the grounds in the early part of the week. Darwin tulips, Persian lilacs, spirea arguta, and golden currants, are at present in full bloom. The Persian lilac is blooming very profusely. Common and French hybrid lilacs have been somewhat damaged by the late frosts and do not show up as well as in previous years.

Five thousand six hundred tomato plants have been set out in the breeding block. Celery and pepper plants, in their respective variety trial plots, will be set out today and Monday.

Fruit trees are almost through blooming. The rain and cloudy weather may have had some adverse effect in the setting of fruit in the case of late blooming varieties, but there has been no serious frost damage and a good set of fruit is expected for most varieties.

MANDAN, continued:

Horticulture, continued.

Weeds are now growing rapidly after the rains. The first cultivation of orchards, small fruits and nursery, is almost finished.

Visitors of the week included Dr. W. P. Komp, Federal Health Service, Washington, D. C., Mr. A. L. Norling, County Agent, McLean County, North Dakota, Mr. I. H. Wells, President, State Holstein Breeders Association, Mr. C. B. Finley, American Guernsey Cattle Club. Owing to the Regional Dairy meetings being held in Mandan this week, a very large number of farmers visited the station.

BELLE FOURCHE:

Cool, cloudy, unsettled weather has prevailed throughout most of the week. A heavy rain of 1.95 inches was received during the first 2 days and another storm of 1.08 inches occurred a couple of days later. The rain was very beneficial to hay crops and fall grain, but as the land seeded to spring crops already contained an abundance of moisture in the first two feet of soil, only a relatively small proportion of the precipitation was absorbed and a great deal of run-off occurred. A total of 4.45 inches of precipitation were received during the month of May, which is 1.64 inches greater than the 21-year normal for May. A total of 8.47 inches of precipitation have been received since January 1 as compared with the average precipitation from January to May, inclusive, of 5.81 inches.

Corn is up but is quite yellow from the effects of the cool weather and excess moisture. Potatoes are coming up, and winter rye is heading. Newly seeded sweet clover and alfalfa have made an unusually rapid growth, and all other crops have made noticeable advancement.

Maximum temperature 77; minimum 37.
Precipitation 3.14 inches.

ARDMORE:

The weather was threatening or stormy during the entire week. There were six periods of precipitation. The largest amount, .92 inch, fell on the 26th.

Almost all the crops and native plants that were showing damage due to drought showed a decided improvement at the end of the week.

Corn, seeded on fallow and fall plowed land, began to emerge on the 29th showing a rather spotted stand by the end of the week.

Field work was possible on the 31st and 1st. Corn fields and plots were drag harrowed. Land to be seeded to sorgo was duckfooted and harrowed. The corn variety test for grain and silage plots were seeded May 31 and June 1. The plowing of summer fallow plots began on June 1. Other work consisted of digging the foundation trenches and the elevator pit for the new seed house. The building of a fence around the new location for the weather instrument yard was begun.

Maximum temperature 82; minimum 45.
Precipitation 1.86 inches.
The total precipitation for the month was 2.18 inches or .71 inch below the seventeen-year average.

CENTRAL GREAT PLAINS FIELD STATION:

All efforts during the week were concentrated on the storage cellar. The forms were placed and all put in readiness for the concrete. In order to complete the concrete walls in one day an additional cement mixer was rented. The car of cement arrived on the 29th and was unloaded the same day. On May 31 the two mixers completed the job of running the walls and center partition. The roof will be run next week.

CENTRAL GREAT PLAINS FIELD STATION, continued:

The second carload of a two-car shipment of sheathing and boards was received on the 29th and unloading was completed the 31st.

A third team of horses was purchased May 31 and put to work with the two teams previously purchased, hauling gravel and building materials.

Mr. A. L. Nelson, Superintendent of the Archer, Wyoming, Field Station was a visitor June 1.

May	26	Rain, high winds	Lowest	37	Highest	58
"	27	Cloudy, rain at night	"	39	"	53
"	28	Cloudy	"	40	"	54
"	29	Clear, strong wind	"	41	"	62
"	30	Clear and calm	"	51	"	74
"	31	Cloudy, showers	"	44	"	64
June	1	Clear				

ARCHER:

The weather has been rather humid, at times quite cool and at other times quite warm. Precipitation has been recorded six days during the week with a total of .77 of an inch. Two sizeable showers occurred; one during the evening of May 25 and the other during the afternoon of May 31.

Work at the station has consisted of hauling gravel preparatory to the construction of a septic tank for the dairy barn and milk house and also one for the remodeled house. The lining up of the roadways in the experimental field is nearly complete. The dry weeds have been hauled from the experimental field. The hauling of manure has continued. All trees around the farmstead have been cultivated the second time this season. The potatoes in the pathological experiment were planted under the direction of Mr. Wiant, of the University of Wyoming.

ARCHER, continued:

Spring seeded crops, for the most part, are making satisfactory growth. Winter wheat is rather backward and under most conditions is poor. A visit to the Nunn area showed that a large percentage of reseeding has occurred. A few good fields were observed which were in marked contrast to the surrounding fields . It is evident there are some features of fallow and seeding which, when other methods have failed, produce a good crop.

The pastures are producing a good growth where they have not been grazed too closely in previous years. Present prospects are good for spring crops.

Maximum temperature 75; minimum 32.
Precipitation .77 inch.

AKRON:

Rains threatened at several times during the week and doubtless light showers were received at different points within the immediate region of the station.

The orchard is receiving the first spraying of the season this week-end. Other jobs were odds and ends of field work about the station.

All winter and spring sown crops are making satisfactory progress. The first corn planted is emerging but it is doubtful if full stands will be realized until surface moisture is received. Squirrels are damaging stands on some of the plots near the borders of the station.

Tulips have been in full bloom during the week. Spirea Van Houttei is breaking into bloom and promises to have fair bloom cover despite early frost injury.

Maximum temperature 88; minimum 36.
Precipitation Trace.

NORTH PLATTE:

The dry spell, which had persisted since May 10, was ended by a rain on the night of the 28th, totaling 1.26 inches. Most of the rain fell slowly and there was but little run-off. Crops are responding rapidly. Practically all corn on the station is up with good stands. Alfalfa is about 18 inches high and first bloom beginning to appear.

Twenty head of Hereford yearling heifers were purchased during the past week. These will be used for a summer feeding experiment. Ten head will be fed on ground ear corn with alfalfa pasture and ten head the same grain ration but alfalfa hay instead of pasture.

COLBY:

On Tuesday, of the past week, 2.08 inches of moisture was received. A great part of that rain fell rapidly and considerable run-off took place. Weather has remained cloudy most of the time since then, but only a trace of moisture has been recorded. The rain was accompanied by some hail, but little damage was done on the station. The rainfall for May was 3.25 inches or .84 of an inch above the 41-year average. The rainfall to date since January 1 is 7.35 inches as compared with an average for the same period of 6.37 inches.

Most of the crops on the station are in good condition. Some of the general field corn was washed out and covered by the heavy rain, but most of the plots were undamaged. The small grains are beginning to head.

Maximum temperature 90; minimum 47.
Precipitation 2.08 inches.

GARDEN CITY:

Weather conditions the past week have been ideal for field work. Practically all sorghum planting on the project was done last Thursday, Friday and Saturday.

GARDEN CITY, continued:

Seed beds are in good condition for planting. There is plenty of moisture in the surface soil to insure good germination.

Some of the winter wheat plots on the late prepared seed beds are beginning to show lack of sufficient moisture. Wheat on fallow plots and early prepared seed beds is making heavy growth. Practically all wheat is 75 per cent headed at this time.

Three days of high wind the first of the week with quite high seasonable temperatures caused wheat to show lack of sufficient moisture on some of the above seed beds mentioned.

For the month of May a total of 4.04 inches of rain fell. Over half of this fell on May the 10th. Runoff was quite heavy at this time.

Maximum temperature 88; minimum 54.
Precipitation .26 inch.

HAYS:

The weather has been quite favorable for the development of the wheat crop during the past week, in fact during the past two weeks, during which time there has been .61 inch of rain, all of which has fallen in small showers. During this period there were a few warm days, but most of the time the weather has been cool. Wheat has reached a very good height, varies in thickness depending upon the method of seed bed preparation, is nearly all headed, and the earlier wheat is passing out of the bloom stage. The heads are only moderate length, but yields should be considerable above average with average weather conditions from now to harvest.

Corn has four to five leaves, a fair stand and looks good but would make more growth with some warm weather. Kafir has two to three leaves, stand a little spotted but more seed germinating. Generally a good stand on the plots, but this like the corn needs warm weather. Milo seems to be doing a little better than the kafir.

HAYS, continued:

Alfalfa is beginning to bloom, is nearly ready to cut. Cutting has already been started on the bottom land alfalfa. On the upland the growth is short. New alfalfa and bromegrass on the plots looks very well todate.

Maximum temperature 88; minimum 53.
Precipitation .30inch.

TUCUMCARI:

Rapid progress has been made the past week in planting and preparing for planting. The June 1 dates of grain and forage sorghums, corn, cotton, and single row sorghum nursery were planted, as were the remainder of all rotation plots. Considerable increase acreage remains unplanted, but most of this is fully prepared.

Germination and emergence the past week have been rapid, for the soil is in excellent condition and the weather has at last turned warmer. To date all stands are unusually good, no replanting being necessary on the earlier planted plots.

Sweet clover, both date plots and increase, was cut and cocked during the week. The yield will be high and hay should be of good quality. Cherries are maturing a heavy crop of excellent fruit, while pears promise fair yields, with apples moderately heavily loaded. No peaches will be produced. Grapes have just completed blooming.

Maximum temperature 88; minimum 43.
Precipitation 0.16 inch. May was quite cool and cloudy, and higher in precipitation than usual.

DALHART:

The first three days (Sunday, Monday, and Tuesday) of the week were excessively windy. This windy weather tended to dry out the soil to a depth of several inches. Some fields and plots which had a heavy green growth showed considerable drying out. For the crops this drying was not severe however.

DALHART, continued:

A rain of 0.51 of an inch fell in two gentle showers on the 30th. Another rain of 0.35 of an inch fell just before dark on the 31st. So the last three days were quite favorable for the seeded crops but delayed seeding which was just getting well under way for the bulk of the station sorghum planting.

Soybeans are emerging to good stands. Peanuts are coming. All of the cotton planted on the 20th is showing emergence, though but two varieties have emerged to a stand. It was possible to get in but two days of planting this week. The ground has been most too cool to rush planting very much. Farmers report some difficulty with getting a stand on the earlier seeded sorghums.

Seed bed preparation, miscellaneous hoeing, and planting were the principal jobs during the week. The sweet clover plots were mowed Friday afternoon. The rain of the same evening prevented hay making to-day.

Visitors during the week included Dr. W. H. Long of the Forest Pathology Station, Albuquerque, New Mexico.

Maximum temperature 88; minimum 44; evaporation 1.84 inches; Wind velocity 7.2 miles per hour; precipitation .86 inch. Precipitation for the month of May 2.21 inches.

BIG SPRING:

Weather conditions have been very favorable for planting during the past week. As a result all of the plots and most of the increase fields have been planted. Considerable difficulty has been experienced in obtaining good stands of cotton. The rains of the previous week baked the soil to such an extent that considerable scratching has been necessary to break the crust in order that the young cotton plants might emerge.

Forage and grain sorghum varieties, cowpea varieties, and soybean varieties were planted during the week; milo and Sudan grass plots were also planted. Practically all grain sorghums and cotton in the rotations have emerged to good stands.

BIG SPRING, continued:

Some of the cotton varieties are rather slow in emerging, and it is possible that some of them will have to be replanted.

Maximum temperature 91; minimum 59.
Precipitation 0.

LAWTON:

Prosecution of field work has gone forward as rapidly and as frequently as possible since May 22. However, untimely rains account for many interruptions and much delay. The precipitation for May was as follows:

May	8	9	10	11	12	17	21	23	24	29	30
	T	T	T	7.39	.48	1.50	.02	.02	.11	.22	2.52

TOTAL 12.26

The excess above the May normal was 7.10 inches.

The excessive precipitation from May 11 to 30 caused lots of erosion making it necessary to fill large ditches on a good many plots, repair roadways, and drainage banks, and spring-tooth and harrow all cultivated land before planting. As a result, grain sorghums, cowpeas, and cotton are subject to the hazards of late planting this year.

Germination and emergence of the above crops has been rapid and very satisfactory . So far, complete stands have been recorded on nearly all plots within a period of four days after planting.

The May 15 planting of grain sorghums was made May 29. The forage sorghums, cooperative cotton series test, soybean varieties, and increase fields of cowpeas remain unplanted because of wet soil. The May 15 planting date of cotton was missed entirely. Cotton planted April 15 and May 1 has made practically no growth and the stands are so ragged that but little value is left.

LAWTON, continued:

Wisconsin winter barley in the date of seeding tests ripened June 1 but the ground is yet too wet for harvest. Tenn. Pidor, and Han River winter barley are also ripe. The Wisconsin barley withstood drought better and is superior in growth and development to any of the above mentioned varieties. Orel is the poorest of the lot and its yeild will be of little consequence.

The weather, since May 11, has been ideal for wheat and oats. Wheat has made a very strong recovery and fairly good yields will be made in a good many instances. On poorly prepared land and on cotton stock land where injury from the spring drought was greater there is, at present, a heavy percentage of blasted heads. Most of the wheat is in the hard dough stage and ranges from 2 to 3 feet in height. There are a good many small, late, green, heads and growth is not uniform. In the commercial fertilizer test an application of 100 pounds of 12-4-4 to the acre seems to have been the most desirable. The heavier rates of 200, 300, and 400 pounds per acre resulted in heavy burning of the foliage during dry weather. Tennmarq wheat which is being directly compared with Turkey Red in a rate and date test is more advanced in maturity and recovered less from drought. A very appreciable percentage of the heads of this variety are only partly filled. From one-third to one-half of the tip end of the heads is not filled.

Oats will probably yield about as they did las year, maybe a little better. The heads are now turning but harvest of both wheat and oats will be much later this year than usual.

The 1929 spring seeding and the two-year-old sweet clover crops are making a very rank, vigorous growth. The two-year-old clover is about 6 feet high and has been in bloom for some time.

The May 1 planting of grain sorghums resulted in good stands except some of the feteritas, even though the furrows made by the furrow openers were filled level full with washing soil. A big improvement has also been made in the stands of the April 15 planting of these crops.

LAWTON, continued:

Cool weather, that is ideal for small grain crops but very poor for cotton, prevailed most of the time during the past two weeks.

WOODWARD:

Main work of the week has consisted simply of getting station free of weeds by plowing, spring-toothing and hoeing. With advent of warmer weather weeds are a problem for the first time during this very backward season.

A few cherries were picked, date plantings of cotton, corn, and sorghums were made.

Wheat continues to be very promising because of continued cool, cloudy weather and a rainfall, slightly higher than average, well distributed.

Mr. C. O. Johnston, of Manhattan and Dr. W. H. Long, of Albuquerque, were station visitors.

Maximum temperature 89; minimum 61; evaporation 1.677inches.
Wind velocity 9.9 miles per hour; precipitation .47 inch.

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U. S. DEPARTMENT OF AGRICULTURE

JUN 3 1929

REPORT FOR THE WEEK ENDING JUNE 8, 1929.

PENDLETON:

The past week has been rather cool and cloudy. Showers the past week totaled .57 of an inch. This makes a total of 1.07 inches for June to date. This rainfall will be sufficient to ripen the wheat crop normally. Borings were made with a soil auger. The soil is moist enough to a depth of six feet to mold with the hands.

The Board of Regents of the Oregon State Agricultural College will inspect the station on June 24. At that time they will award the contract for the construction of the superintendent's residence.

Maximum temperature 77; minimum 35.
Precipitation .57 inch.

HAVRE:

The past week was very favorable for the growth of all crops. Following two days of heavy east wind, rain amounting to 1.43 inches fell on the 2nd and 3rd. This came slowly and was practically all absorbed by the soil. Temperatures have been cool since that time with the wind almost continually in the east. Corn has emerged with apparently very good stands. It was necessary to replant the flax plots, due to crusting and possibly a little too deep seeding.

Roadways and alleys are being cultivated and a start made on the cultivation of the corn. Commercial fields to be fallowed were either plowed, duckfooted, or cultivated with a one-way disk during the week.

Winter rye is headed and some of the early spring grains are shooting. Early potatoes are up.

Range grasses are in excellent condition, and the prospects are that our first cutting of alfalfa and that from domestic grasses will be heavy this year.

HAVRE, continued:

The canker worm which has caused a great deal of trouble in the shelterbelt in the past is again in evidence. We expect to get this sprayed during the next few days. The set of fruit on the plums seems to be very good.

President Alfred Atkinson, of the Montana State College, was a station visitor June 7.

Maximum temperature 78; minimum 40.
Precipitation 1.43 inches.

JUDITH BASIN:

Seasonable cool weather with favorable soil moisture conditions have caused rapid growth of all crops. Winter wheat and rye have developed more rapidly than spring sown grains. Driving rains with high winds, experienced ten days ago, whipped the tender spring grain plants and retarded normal growth. Sweet clover, alfalfa and grasses have advanced unusually fast.

A cloud-burst in the storm a week ago flooded the south end of the Basin and washed out bridges, fences and did some damage to crops.

Plowing for summer fallow was completed on the rotations. Corn plots and corn on hog lots was harrowed. The last date of seeding grain hays was finished.

Trees and shrubs made marked growth. Some of the early orchard plantings have blossomed. All the species in shelterbelt blocks are leafed out.

Mr. D. E. Richards, livestock specialist of the Montana Extension Serive, was a visitor at the station.

Maximum temperature 78; minimum 34.
Precipitation .18 inch.

HUNTLEY:

Half an inch of rain received on June 1 followed by warm weather during the rest of the week have made a marked improvement in the appearance of crops in this locality. Small grains have made considerable growth in the last few days, and, although stands are thin and many of the plots weedy, the grain at present appears to be ahead of the weeds. Stands of corn on fall plowing and similar well prepared seed beds are about complete, whereas on spring plowing and cloddy ground, the showing is yet very poor. Beans have also come up with good stands in most plots.

Weeds continue to make a luxuriant growth. Roads and alleys have been cultivated twice and will soon be ready for a third working. Cultivators were started in the row crops this morning.

Maximum temperature 82; minimum 36.
Precipitation .52 inch.

SHERIDAN:

Heavy rain extending over a short period the evening of June 1, and showery conditions prevailing over the most of the week, prevented much of any field work the first part of the week. During the last three days seeding of late forage crops was completed, the only seeding now remaining to be done being late plantings of corn and potatoes.

All crops made a fair growth during the week. The hay crop now promises to be exceptionally heavy. Roadways have been lined and are being worked down to-day.

The rain of Saturday evening was much heavier over the divides south and east of this section around the sources of the streams flowing through here. Water in these streams was raised to higher levels than have ever been known before. A considerable amount of livestock, machinery, and outbuildings were carried away by the flood and many houses were flooded. About a quarter of a mile of the Burlington track just below the station was washed out, delaying trains for about 20 hours.

SHERIDAN, continued:

The rain in Sheridan was light, and the level of the streams running though town was not raised materially.

Maximum temperature 83; minimum 40.
Precipitation 1.38 inches.

DICKINSON:

A shower during the morning of June 7, which totaled .49 inch here, was much heavier to the west and, at Beach, North Dakota, almost five inches were recorded. Washouts occurred on the Northern Pacific at several places in Western North Dakota and Eastern Montana. No through trains are expected until about Tuesday or Wednesday of next week.

The total rainfall during the past two weeks amounts to over 3.5 inches, and crop prospects are greatly improved. The outlook is somewhat better than at this date last year.

Alfalfa and sweet clover have made rapid growth during the week with indications of a good hay yield. Crested wheat grass, now heading, is still ahead of Brome-grass and Slender wheat grass in amount of growth.

Plowing of fallow on the rotations, which had been delayed some by wet weather, was completed. All corn was harrowed.

Millet, Sudan grass and sorgo were seeded. Three varieties of soy-beans were planted for the Office of Forage Crops to secure seed for analysis for oil.

Visitors included Dr. H. L. Walster, Agronomist, North Dakota Experiment Station, and County agent J. C. Russel, of Beach, North Dakota.

Maximum temperature 73; minimum 37.
Precipitation .96 inch.

MANDAN:

Agronomy

Conditions have been generally favorable to crop development, and to work in the fields. Temperatures have increased moderately during the week. On the whole, all crops are making a very satisfactory showing for this time of year.

Plowing for fallow, and for the rye and sweet clover green manures, was finished early in the week. According to samples of sweet clover and rye, the amount of green manure turned under was as follows: Rot. 31, 12 tons; Rot. 32, 8.8 tons; Rot. 14, 1.6 tons, and Rot. 15, 2.1 tons. Rye was quite poor compared with most former years, while sweet clover was about as good as we have ever had it.

Severe cutworm damage to wheat fields has been reported from various sections around Mandan. No appreciable damage to wheat has been observed at the station, but there is evidence that there will be some damage to corn.

The first cultivation of surface planted corn will be completed this week. Corn is about 5 inches high at this time and is showing a good color.

Trimming plots was completed this week. The work was done with a disk cultivator. Alleys were also cultivated.

The first appearance of leaf rust was reported by Mr. E. R. Ausemus, in charge of the wheat breeding nursery.

Soil samples were taken on wheat in the Main field, and on grazed and ungrazed areas at the grazing pasture.

Arboriculture

Chinese elm and Caragana seedlings have been cultivated during the past week. Cultivation of specie testing blocks and pruning, cultivation and spacing experiments, has started. Conifer seedlings have been cultivated with the power cultivator.

MANDAN, continued:

Arboriculture, continued.

Twenty-one pounds of American elm seed has been picked and planted.

Hoeing has commenced in the shelterbelt nursery, weeds having made a fast growth during the past week.

Horticulture

Spring stand and winter injury notes on fruit trees and shrubs are now being taken. The amount of winter injury is far greater than was thought to be the case a month ago. Cherries were generally entirely killed or severely injured. Japanese x native hybrid plum varieties were severely killed back. Cree was perhaps the hardiest of the hybrid plums and suffered little or no injury. Sandcherry X plum hybrids were also severely killed back. Opata was killed back more severely than it has been for at least 8 or 10 years, and even Compass trees showed dead branches here and there. Prunus americana and Prunus nigra varieties passed the winter with little or no winter injury, except in the case of Terry, which was killed back in some places. Trees in protected coulees came through much better than trees on higher ground.

Currants, June-berries, and sandcherries came through the winter in good condition for the most part. However, some of the larger fruited varieties of red currants were killed back to a considerable extent. Gooseberries suffered severe damage in the variety trials, and for the most part will produce little or no fruit. Even Carrie and Houghton were severely killed back. It is interesting to note that Carrie gooseberries in the west field, in heavier soil and a well protected place, were not severely damaged, while those in the sandy soil of the variety testing plot, were killed back to the ground. A few selections of native gooseberries came through the winter without injury.

MANDAN, continued:

Horticulture, continued.

Apples and crabs suffered a variable amount of winter injury, depending on the variety. Such varieties as Delicious, Malinda, Gano, Northwest Greening, and a few others, were entirely killed or severely injured. Even hardy varieties such as Longfield, Patten, Duchess, and Anoka, were sometimes severely injured. Wealthy generally suffered severe damage. Some of the crabs appear to be hardier than any of the apples, unless it is Hibernal, and most varieties came through the winter in fair condition.

It now appears that there is a good set of most fruits that were not killed back too severely. Plums, crabs, some apples, Juneberries, sandcherries, currants, and most native fruits, give promise of producing good crops if one is to judge by the heavy set of fruit on the trees that have come through the winter in good condition.

The following have been shipped to the Central Great Plains Field Station, Cheyenne, Wyoming, this spring:

Seedling Green ash 25,000 Seedling Caragana 20,000

Seed. Boxelder, 110 lb. Green ash, 110 lb. Caragana, 30 lb. Russian olive, 35 lb.

Cabbage plants,	750	Cauliflower,	400	Celery,	450
Peppers,	150	Eggplant,	75	Tomatoes,	600

The following quantities of trees and fruits have been shipped this spring on the Cooperative Shelterbelt Tree planting project:

Hardwoods	512,055	Conifers	10,860	Fruits	1,200

BELLE FOURCHE:

The weather has continued cool, cloudy, and stormy, and a heavy rain of 1.49 inches precipitation occurred at the beginning of the week. Small amounts of precipitation were recorded each of the following days, and the ground remained too wet to permit work in the field until to-day.

BELLE FOURCHE:

In the past two weeks, rain has been received every day and a total of over five inches precipitation have been recorded. Soil samples taken June 8 show that the first 18 inches of soil are practically saturated, but that moisture has penetrated to a depth of from only 2.5 feet to 3 feet on plowed land.

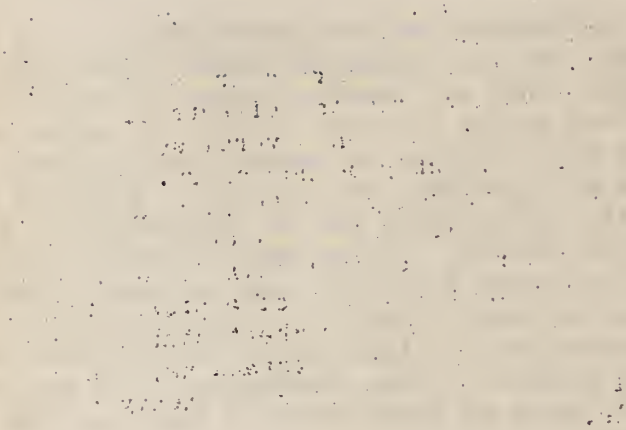
The cool, wet weather has been unfavorable to the growth of a number of crops, but fall grain and sweet clover have made distinct advancement. Corn and numerous areas of small spring grain have turned very yellow from the effects of excess moisture. Poor stands of corn were obtained on several spring plowed plots, and some replanting will probably be necessary. Potatoes are coming up very slowly and unevenly and it is doubtful if a satisfactory stand will be secured. Yellow sweet clover is nearly knee high, winter rye after sorgo and after corn is about 4 feet tall, and winter wheat has attained a height of approximately 16 inches. The advantage of winter rye on winter wheat stubble over winter rye on spring wheat stubble is very outstanding, the crop on winter wheat stubble being at least twice as heavy as that on spring wheat stubble.

ARDMORE:

The weather during the week was cool and cloudy. There were six periods of precipitation. The largest amount falling in twenty-four hours was .80 of an inch on the 2nd.

Field work was possible on two and one-half days at the end of the week. Corn in the plots and on small fields was drag harrowed. The land reserved for Sudan grass and sorgo was cultivated with the duckfoot and drag harrow. Beans on the main rotation plots and in the variety test plots were seeded on the 8th. Sorgo on the main rotation plots was seeded on the 8th.

Winter rye became well headed and some of the early varieties of barley and oats were beginning to show heads during the week. Potatoes seeded on May 14 emerged June 8.



ARDMORE, continued:

Dr. B. W. Miller, Senior Veterinarian, Bureau of Dairy Industry, was a station visitor during the week.

Maximum temperature 76;minimum 44;precipitation 1.33 inches.

CENTRAL GREAT PLAINS FIELD STATION:

Adverse weather conditions prevented running the concrete roof for the root cellar. Conduits with electric wiring and roof forms are in place and all in readiness for the concrete gang when weather permits.

Excavating for the headhouse of the greenhouse will be completed to-day. Wagon scale was set on concrete base and in working order June 8.

Tractor breaking the S.½ of Section 16 has been under way all week.

A shipment of tomato, cabbage, cauliflower, celery, peppers and eggplant was received from the Mandan Station on June 6, and put in the garden plot on Section 9 the same day.

A heavy hailstorm early Sunday morning broke a few panes of glass in the office and bunkhouse windows where the screens had not yet been put on. No damage to any extent was done to the oats or vegetable crops on Section 9. This was followed by a cloudburst about 15 miles northwest of the station, as a result of which the Crow Creek went beyond flood stage. Damage to hay meadows was reported by ranchers along the creek bottom. Roads and bridges were washed out north of the station and considerable damage done to dwellers along the creek bottom in Cheyenne.

Maximum temperature 72;minimum 34;precipitation .54 inch.

AKRON:

Rain threatened practically all week, but there was no precipitation in appreciable quantities here at the station. On Monday, and again on Tuesday, a dense fog persisted throughout each day. Clouds gathered Thursday evening, and from all appearances consequential showers were received on all sides of the station except the sides immediately to the east and west. A good, soaking rain is badly needed in this region, although drought injury is just beginning to show.

Winter wheat here on the station, in many instances, is disappointingly slow in showing yield possibilities. Some winter wheat and some spring seeded small grains are beginning to show shortage of moisture.

Corn has emerged to fair stands on most plots and most preparations, but cut worms are very actively decimating stands. A good, soaking rain would tend to curtail their activity and would doubtless bring up more kernels not yet germinated.

The grain and forage sorghums were seeded in the General Forage Variety Experiment early in the week under favorable circumstances. Prospects are bright for speedy emergence, unless a heavy rain is received, which would doubtless slow up germination by cooling off the soil. There appeared to be plenty of moisture on both the fallow and the small grain stubble preparation for immediate germination.

The sorgo nursery was also seeded early in the week. The winter wheat and spring grain nursery was weeded during the week. The rotation fallow plots were plowed and packed this week-end. Other work consisted of cultivating roadways and alley-ways and grinding feed for the pigs. One half-day was spent shearing sheep, but it is doubtful if this important operation can be taken up again until after the picnic next week.

There has been a good full set of fruit on the orchard trees.

Maximum temperature 80;minimum 41; precipitation .45 inch.

NORTH PLATTE:

The entire week has been cool and cloudy. There was sunshine only on parts of two days. Five days were 100 per cent cloudy. The mean temperature was 58.2 degrees, and evaporation only .727 inch. Rain was recorded on five days, but the total is only .54 inch.

First-crop alfalfa is ready to be cut, but mowing is being delayed for more favorable cutting weather. Green manure rye plots were plowed June 6. Small grains are making rapid growth. Corn plants are yellow, showing the need of sunshine and higher temperatures.

COLBY:

With a measurable amount of rainfall on five days of the past week, it was impossible to accomplish field work. The sky has remained cloudy most of the time during the week.

The small grains made some growth during the week in spite of the cool, damp weather. Barley is nearly headed and oats and spring wheat are beginning to head. Winter wheat on the farm does not seem to be developing rapidly.

Work accomplished consisted of digging a cess pool for the protein laboratory, repairing farm machinery, and general rainy weather jobs.

About seventy menbers of the local chamber of commerce were station visitors Wednesday, June 5. Mr. Swanson, of the Hays Station, and Professor Parker, of the main station, were visitors Thursday afternoon.

Maximum temperature 78;minimum 48;precipitation 1.11 inches.

GARDEN CITY:

Spring planting was finished on the Dry-Land project the past week, with the exception of drilled sorghums which go in on seed-bed preparation plots. At this time, practically every plot is up, stands are good and the soil contains an abundance of moisture for germination and quick starting.

GARDEN CITY, continued:

A total of one inch of rain fell the past week. Thursday night .94 inch fell in a slow drizzle, practically all of which soaked into the ground. Wheat was in need of moisture. It had reached the stage where some slight burning had taken place. With average weather conditions for the next three weeks a reasonably good yield should be harvested on the better prepared seed-bed plots.

The instrument yard takes up four plots on the project. These plots have had a heavy growth of Burr ragweed on them. This weed closely resembles field bindweed in habit and growth. This is especially true of the damage it does to crops and the trouble encountered in getting rid of it. The area was sprayed with sodium chlorate on Friday. At this time all weeds appear to be dying. Intentions are to follow up the first spraying with more this summer until all of the weed is permanently killed.

Maximum temperature 92;minimum 50;precipitation 1.00-inch.

TUCUMCARI:

The week was only moderately hot, but the heat was oppressive, for humidity was high and rain threatened nearly every day. Rapid growth of crops and weeds occurred, and much of the time has been spent in hoeing and mowing the latter. Some increase land was planted and all increase still to be planted was cleaned of weeds with the field cultivator.

Early Richmond cherries have been picked and high yields were recorded. Montmorency are now maturing rapidly and yield of this variety will also be high. A number of apple trees carry a fair load of fruit.

Sweet clover, which was cut a week ago has stood in the cock and now is being turned preparatory to hauling early in the week. Threatening weather has made handling hazardous, but it is hoped this very satisfactory crop may be stored without damage.

Maximum temperature 91;minimum 52;precipitation .19 inch. Wind velocity 5.8 miles per hour;evaporation 1.988 inches.

DALHART:

The weather the past week has been favorable for crop growth, and, in the main, favorable for field work. The work during the week consisted of seedbed preparation, seeding sorghums and cowpeas, and working the row plots that had emerged to a stand. All experimental seeding of row crops was completed during the week, except, of course, the late seeding for the sorghum varieties and the cotton. Soybeans emerged to excellent stands during the week. This was also true for the cowpeas and Pinto beans. Peanuts are showing some difficulty in emerging to stands. The second date of planting the sorghum varieties was seeded June 3 and emergence is starting to-day. Moisture conditions are favorable for emergence now, and, unless a hard rain comes soon, excellent emergence is expected.

The grapes are blooming now and give every indication of good fertilization. The early cherries are just beginning to get fully ripe. The trees are fairly well loaded with fruit.

Maximum temperature 88;minimum 51;precipitation .25 inch.

BIG SPRING:

One light rain of .24 inch, together with some hot weather, has been very favorable for crop growth. Cotton, especially, has responded to these conditions and has made a very good growth. Practically all station crops have emerged to good stands and are growing off well.

All plots in the rotations field have been knifed. Plot ends will be trimmed and thinning started next week. The wheat plots were harvested with the mowing machine during the week. The straw was so short that a binder could not be used.

Maximum temperature 96;minimum 60;precipitation .24 inch.

LAWTON:

Three rains of .48, .28, and .08 inch during the week suspended field work on soil that was already saturated, from May 29 until the afternoon of June 8. On the latter date only a few places were dry enough to till. The total precipitation from May 11 to June 6, inclusive, amounts to 13.10 inches.

Maturity of small grains is advancing very slowly and very unevenly. In the oats fields and plots an appreciable per cent of the heads have been ripe for some time, but the major portion of the crop, which consists of late developed tillers, is only beginning to turn. Wheat will also ripen unevenly, due to the same manner of growth and development. On account of the plentiful supply of moisture available to mature the wheat and oats, it is likely that some very good yields will be obtained on the station.

The second growth of alfalfa is excellent and about ready to cut. Corn will be too large to cultivate within another week.

A good deal of thinning on the grain sorghum projects has been done and the work will be continued as rapidly as possible, although the plants are rather small.

Mayflower peaches have been ripening for a week or more. Messers. Stanton, Murphy and Quisenberry visited the station June 3 and 4.

WOODWARD:

All fruit trees were sprayed this week, and many of the Cereal Office grain sorghum plots were planted. Orchard and vineyard were disked, and much miscellaneous hoeing was done.

Weather has been characterized by moderate temperatures and heavy dews or ligh showers every night. This is helping wheat to mature in good shape, though there has been no heavy rainfall.

WOODWARD, continued:

Yields of wheat will be more variable from field to field this year than usual, depending largely upon what stage it was at when heavy damaging rains struck it last fall.

Army worm, stem maggot, grasshoppers, etc. are doing minor damage to wheat in localities.

Maximum temperature 97; minimum 54;precipitation .14 inch.
Wind velocity 5.9 miles per hour; evaporation 1.338 inches.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 1 6 1919

REPORT FOR WEEK ENDING JUNE 15, 1929.

HAVRE:

The past week was again very favorable for crop work. A rain of .65 inch fell on June 8. This came rather heavy and was accompanied by some run-off.

Reseeded flax is coming with only a fair stand, due to crusting after the rain of the 8th. Corn is being cultivated for the first time. Alfalfa is showing some bloom and will be ready to cut within the next few days.

Conditions generally over this section of Montana are as good as they have been since 1915. Range grass has made very excellent growth, especially during the last two weeks.

Maximum temperature 86, minimum 44; precipitation .65 inch.

JUDITH BASIN:

Favorable growing weather continued during the past week and crop growth was rapid. Winter grains have made pronounced advancement. Winter rye is headed out. Flax and corn show good stands and vigorous development.

Forage crops are thriving. Sweet clover in the hog pastures is being mowed in order to maintain the most palatable feed. Alfalfa has not advanced quite as rapidly but will have to be cut later. Sweet clover in the cow pastures is demonstrating higher carrying capacity than the grasses. Cows were moved to unpasturdd lots to-day.

Ranges, pastures and hay lands have improved rapidly. Livestock are in good condition.

Shelterbelt plantings and orchard trees are making good growth. The spruce are most vigorous in the conifer plantings. Pines will apparently have difficulty in surviving this season.

Visitors included a class of Smith-Hughes students from Gallatin County High School, in charge of Mr. D. L. McDonald and Mr. W. C. Cook, Associate Entomologist from the Montana Experiment Station.

Maximum temperature 81; minimum 45; precipitation .10 inch.

HUNTLEY:

Good growing weather prevailed throughout the week and, where moisture was available, crops developed rapidly. Corn, beans, potatoes and sorgos are still coming up as germination has been encouraged by the recent light showers.

The chief field work has consisted of cultivating row crops. It has been necessary to follow the cultivator by hand hoeing to get the weeds in the crop rows, as emergence and growth of the crops has been so irregular and slow this spring that weeds have obtained too great a start to be subdued by ordinary cultural methods.

Winter rye is in blossom and winter wheat is heading out.

Maximum temperature 88; minimum 38; precipitation .30 inch.

SHERIDAN:

With the exception of two days, the weather for the week was fair and warm. Crop growth continued good and late forage crops emerged with a fair stand. Sweet clover and alfalfa have begun to bloom, and brome-grass and crested wheatgrass are headed. The week was largely spent in hauling manure from the corral and in controlling weeds. Fall plowed and early plowed fallow was duckfooted. Corn was harrowed early in the week. The harrow broke the crust in good shape but killed few weeds. Consequently it was necessary to start cultivation of the corn in the rotations to-day, the 15th. The rotation alleys also are being cultivated.

Maximum temperature 86; minimum 37; precipitation .14 inch.

DICKINSON:

Two good rains during the week have increased the water supply in the soil and provided ideal growing conditions for most crops. Early in the week weather was too cool for corn but warmer temperatures came near the end of the week.

DICKINSON, continued:

The general crop outlook is good. Small grains which have been backward and somewhat irregular in growth have greatly improved in appearance. Water now in the soil should cause the stands to thicken and rapid growth should keep ahead of weeds. A good many reports of cutworm damage have come in but the percentage of acerage affected is small. Fields badly damaged have been reseeded to corn, flax or millet. Alfalfa and sweet clover and all other hay and pastures have made rapid growth. Rye is beginning to head with a stand which is generally thin and spotted.

Corn and potatoes on the rotations and the increase fields were cultivated for the first time. Some work was done on the roadways in placing culverts to handle the run-off. Some grading is yet to be done.

Mr. Robert L. Shotwell, of the Bureau of Entomology, visited the station on the 13th.

Maximum temperature 83; minimum 41; precipitation 1.87 inches. Precipitation to date in June amounts to 2.83 inches, and since January 1, 1929 to 11.24 inches, over 4.0 inches above normal.

MANDAN:

Agronomy

General crop conditions have been good. Temperatures have continued to rise moderately with all crops responding in rapid growth. Gentle rains during the fore part of the week were very beneficial.

An attempt to duckfoot a 15-acre feed block in Field P met with failure on account of too much stubble and volunteer growth. Even after raking and burning it was impossible to make the first cultivation with a duck-foot.

The first cultivation listed corn with a lister cultivator was very successful.

MANDAN, continued:

Agronomy, continued.

Slight cold damage to corn and sorghum was observed following a minimum temperature of 36 degrees. The effect produced was a slight whitening of the leaves.

Roadways between series were cultivated with an alfalfa renovator followed with a duck-foot cultivator.

Maximum temperature 86; minimum 36; precipitation .71 inch.

Arboriculture

The edges of all species testing blocks and roads have been cultivated with the orchard cultivator. Cultivation of seedlings in the nursery has commenced.

Part of two rows of willow stumps have been dug in the west Main shelterbelt, in order that the land may be plowed.

All pruning, spacing and cultivation experiments have been sprayed with lead arsenate, to combat a caterpillar which is stripping leaves off boxelder and ash. Caragana hedges and seedlings have also been sprayed to prevent damage by blister beetle.

Hoeing has commenced in the Species Testing blocks. Weeds are now making a vigorous growth in all fields.

Preparation for inspection work this summer is completed. The work will be performed by three men commencing July 1, who will visit 70 ten-year old plantings, 187 five-year old plantings, 201 new plantings, and 40 new conifer additional plantings. In addition land will be inspected on 160 farms in Montana, 113 in North Dakota, 105 in South Dakota, and 50 in Wyoming for planting shelterbelts in 1930. Land will also be inspected on a number of farms for planting conifer additions in 1930.

MANDAN, continued:

Horticulture

The second seasonal spraying of fruit trees and small fruits has been completed. Arsenate of lead, lime sulphur and micotine sulphate, was used in a combination spray.

The second cultivation of the orchards has started. This will be followed by hoeing.

Budded plants in the nursery have been staked and tied. Good stands were generally obtained from last year's budding.

Most plants are making a rapid growth now, under the influence of rains and warm weather.

Dr. Johnathan Carver, Archiologist, from Lima, Peru, on his way, via Seattle, to the West Indian Islands, spent Wednesday at the station; also Mr. Ralph Smith, Cereal Crops and Diseases, Dickinson Sub-Station, North Dakota.

BELLE FOURCHE:

Clear, warm weather has prevailed during the greater part of the week, and with but one or two exceptions the nights have been unusually warm. The warm weather has been very favorable to plant growth, and all crops have made rapid development. Winter rye is nearly 5 feet tall, and winter wheat is beginning to head at a height of approximately 20 inches. Small spring grains in rotations have attained a height of about 12 inches. Yellow sweet clover and alfalfa are beginning to blossom.

Work in the field has consisted of planting sorgo, plowing under green manure crops of sweet clover and winter rye, cultivating corn and potatoes, duckfooting fallow plots and roadways, and cultivating alleys.

Maximum temperature 88; minimum 45; precipitation .05 inch.

ARDMORE:

The weather during the week was hot and dry.

The soil moisture available for plant use became exhausted for the second time this season and all small grain, pasture and alfalfa crops were showing considerable drought damage at the end of the week.

Field work was carried on every day of the week. The corn in the rotation plots, small fields, and about 20 acres in the larger fields was cultivated. The seeding of Sudan grass and sorgo was completed. About 8-1/2 acres of land along the second flood bottom of Hat Creek were seeded to Grimm alfalfa. About 35 acres of alfalfa were mowed during the week.

Mr. Albert Osenbrug, Associate Agronomist in Charge of Dry Land Work at the Newell Experiment Station, was a station visitor during the week.

Maximum temperature 90; minimum 44; precipitation Trace.

CENTRAL GREAT PLAINS FIELD STATION:

The concrete roof was run on storage cellar June 12. The wall forms were removed June 15. A tar coat will be given the roof before covering with earth.

Excavating for the headhouse of the greenhouse was completed June 13, and cement footings and support column bases run. Side wall forms were placed June 14. Excavating for water line from the seedhouse to the headhouse were begun June 15.

The teams, when not engaged hauling sand and gravel, have been leveling around the barns and hauling earth to bring the court between the packing and implement sheds up to grade.

Corral and pasture north of the barns were staked out June 14.

Crops in the vegetable garden are coming along nicely. As yet no damage has been done by hail.

CENTRAL GREAT PLAINS FIELD STATION, continued:

Mr. Wm. DuBois, consulting architect, called June 14 and went over the plans for the headhouse.

Maximum temperature 82; minimum 45;

AKRON:

The first real hot weather of the season was experienced this past week. There has been no relief from the drought through to-day, June 15. Storms are threatening.

The early barley, oat, spring, and winter wheat varieties are breaking into head. Small grains on corn land are burning badly though fallow preparation is still holding nicely.

Corn is making no progress, and squirrels and cut worms are decimating the stands sharply. It is possible to find practically both mature cut worms and others apparently just emerged from the lower depths in the same hill of corn. The sorgos seeded soon after the first of June are emerging spottedly.

The annual picnic passed into history with the close of Wednesday. The usual large crowd was present to share in the festivities. The chief attraction of an educational nature was an illustrated lecture by Francis Flood covering parts of his recent trip around the world.

Considerable time was spent during the week getting ready for the picnic and in policing the grounds after the picnic. All corn which was large enough was cultivated this week-end, and a start made towards counting the stands. The orchards were cultivated and the main orchard hoed. Potatoes were planted to-day. There is a good stand of alfalfa on plot C of rotation 42 which yielded at the rate of 550 pounds of air dry hay to the acre. There was practically no stand of brome-grass on any of the plots of rotation 41.

Wiegelie, Mock Orange, and Spirea Aurea are in bloom this week-end.

AKRON, continued:

There appears to be a good set of fruit on the apples this year. The cherries and plums are carrying maximum crop. Gooseberries were picked during the week. Plants set in 1924 averaged about two quarts to the plant.

Maximum temperature 93; minimum 47; precipitation 0.

NORTH PLATTE:

Weather has been dry with high temperatures on all but two days. As is usually the case, the dry, hot spell, following a period of cool moist weather, is showing a quick injurious effect on small grains. Except on those after fallow, the base leaves of all small grains are beginning to fire. Winter wheat and barley are in full head and first heads are appearing on oats. The success or failure of the small grain crops will depend largely upon the rainfall of the next two weeks. If the June deficit is made up, a good crop should result. With continued dry, hot weather, the crop will be quite short.

Corn has been given its first cultivation and is growing rapidly. Good progress has been made on the station and surrounding farms during the week in putting up the first crop of alfalfa.

Superintendent Snyder returned on June 17 from a trip to Philadelphia where he attended the Annual Meeting of the Holstein-Friesian Association.

COLBY:

Temperatures remained fairly high during most of the past week. It was possible to work in the fields all week. Sorghum planting was completed yesterday, June 14. Conditions were such that all sorghums went into the ground in good shape. A little replanting of sumac in the general fields was necessary because of the heavy rains of a week ago. Field peas were turned under for green manure and the two late plowed fallow plots were turned.

COLBY, continued:

Corn has made a rapid growth and is now showing above the lister ridges. All experimental corn was cultivated during the week.

One carload of Agronomists from Nebraska, and one from Ames visited the station on their return from the meetings at Manhattan and Hays. Supt. Wagner and Mr. R. L. von Trebra, of the Garden City station, were visitors to-day.

Maximum temperature 91; minimum 50; precipitation .19 inch.

TUCUMCARI:

Precipitation the past five weeks has totalled only .68 inch and wheat and ranges are showing need of water. A recent trip over the wheat section of the county impressed one that yields are being materially reduced by the dry weather and periods of high wind. Harvest over the county will be in full swing within ten days to two weeks and yields are being estimated from 8 to 20 bushels, with 13 to 16 perhaps the average.

Sweet clover on plots and increase was hauled during the week, yields averaging about 1800 pounds per acre. A large amount of cultivating has been done. A heavy yield of high quality cherries is being picked, and fallow plots are being field cultivated. M. C. wheat and rye plots are being harvested to-day, being more advanced than any other small grain seen in this county this year. There is great variation in the various plots, fallows and early plowed being much superior to the late plowed. M.C.D.wheat should yield close to 20 bushels, M.C.D. rye not far below this, while the A plots will probably not produce over half of this quantity.

Extension Agronomist Quesenberry, of the State College, accompanied by Mr. O. S. Fisher, Senior Agronomist, U.S.D.A., visited the station early in the week, while Mr. B. F. Barnes, of the Dalhart station, was here Thursday, June 13.

Maximum temperature 97; minimum 50; precipitation .05 inch
Wind velocity 6.0 miles per hour; evaporation 2.515 inches.

DALHART:

If to-day, June 15, is a sample, summer has arrived. The weather has been characterized the past week by cool nights and rather warm days. Very little precipitation has fallen on the station. Good showers have fallen every direction from the station but none have quite reached here. To-day, the wind velocity is rather high and the atmosphere is dry. Yesterday and to-day the native vegetation and rye showed pronounced signs of drying. Wheat, oats, and barley continue to look fine. Oats and wheat on the station really look as promising to-day as they have looked all season. Oats are very good. The yields of the sweet clover plots were very good. The exact acre-yields have not been calculated, but the yields should average well over a ton to the acre of good hay from the twenty plots. Plots planted the previous week have all emerged to a stand.

Fallow rotation plots were plowed during the week. The last date of planting cotton was made on the 10th with three varieties of cotton. The May 1, May 10, and May 20 dates of seeding cotton were thinned to uniform stands yesterday and to-day. After planting the first of the week, manure was applied to the plots that are top-dressed. The increase, wind break areas, and terraced fields were all seeded the fore part of the week. All corn plots and the cotton varieties (those that had emerged) were cultivated during the week. The first date of the variety test of sorghums was also cultivated. The last date of the sorghum varieties is being seeded to-day. Corn plots are also being thinned to-day.

The early cherries were picked during the week. Gooseberries were also picked during the week. The cherry yield was very low while the gooseberry bushes were loaded.

The tree plantings were cultivated during the week and some of the lower branches were removed.

Maximum temperature 93; minimum 47; precipitation .59 inch.
Wind velocity 4.2 miles per hour; evaporation 1.913 inches.

BIG SPRING:

Very favorable growing conditions have prevailed during the past week. Although the weather has been hot, this, together with favorable soil moisture conditions, has caused all crops to make a good growth.

Although many farmers throughout the county have had to plant their cotton over two and three times for various reasons, they seem to have obtained good stands from the last planting.

Station work during the week has consisted of knifeing plots and increase fields, trimming plot ends, and thinning kafir. The June 15 date of planting cotton and sorghums was made on the 14th. Weekly soil samples were taken on the M. C. milo plots.

Maximum temperature 105; minimum 70; precipitation 0.

LAWTON:

Field work progressed without interruption during the past week of hot, dry weather. Forage sorghums and the cotton varieties in the date test were planted June 10. The soybean nursery cooperative cotton series, and grain sorghum chinch bug project were planted June 11. An increase field of cowpeas was planted June 12. Harrowing, cultivating, and thinning of row crops also received attention. Small grain harvest during the week included six plots of Tennmarq wheat, one each of Mediterranean, and Fultz, and several plots of oats. All of the winter barley was harvested June 12.

Wheat and oats are ripening very rapidly and harvest should continue steadily the next week. Oats is not maturing normally. The late heads which constitute so much of the crop are not filling. The straw is weak and lodging rapidly.

Two varieties of Soybeans, the Laredo and Chiquita, which were planted May 29, have been practically destroyed by rabbits. Mung beans planted on the same date do not show any injury.

About 6 or 8 tons of alfalfa were cut and shocked and will be baled within a day or two. Two-year old sweet clover in the seeding project was cut June 14. The crop averaged about 59 inches high.

LAWTON, continued:

Corn on the M. C. H. plot is tasseling.

The surface soil dried so rapidly the past week that plantings of row crops are not emerging and probably will not until some moisture falls. The ground was barely dry enough to work when the crops were planted.

Maximum temperature 94; minimum 63;

WOODWARD:

Practically the entire week has been hot and windy, with two days above 100 degrees. The wheat is ripening very rapidly, and harvest will likely commence during the coming week. It is very likely that the grain will be somewhat shriveled, as much of the straw seems to be nearly ripe while the grain is hardly in the hard dough stage.

Some planting was done on the Cereal project. All of the kafir, milo, broomcorn, sumac and Sudan grass has been planted on the D. L. A. project, and the last date of cotton was planted on the 10th. All of the cotton that was large enough has been thinned. Grapes have been sprayed with arsenate of lead and nicotine sulphate to control grape root worms and grape leaf hoppers.

Messrs. E. F. Chilcott and J. B. Sieglinger of this Station left Thursday, June 13, to attend the meeting of the American Society of Agronomy at Hays, Kansas.

Maximum temperature 104; minimum 51; precipitation .02 inch.
Wind velocity 7.4 miles per hour; evaporation 2.678 inches.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 22 1929

REPORT FOR WEEK ENDING JUNE 22, 1929.

PENDLETON:

The station was visited by a committee of the Board of Regents of the Oregon State Agricultural College on June 21. Doctor Kerr, President of the College, Director J. T. Jardine, and Dean Geo. W. Peavy accompanied the board on their trip to the various stations.

On Saturday afternoon, June 22, the first annual field day was held. The field day was held in connection with a farm tour organized by County Agent Walter Holt. About 150 farmers were present. The work of the station was gone over rather hurriedly on account of a limited time.

Harvest in this section will begin about July 15 to July 20, depending on variety of wheat and altitude. Fifty bushels after summerfallow will be a common yield this year in the reservation section.

Some of the roadways have been cut for hay. A span of horses for station use were delivered June 16.

HAVRE:

The past week was again favorable for small grain, but a little cool and cloudy for corn. Precipitation, however, was not excessive with .54 inch recorded on four days.

Most of the cultivated crops were gone over during the week. Dry-Land alfalfa was cut and the irrigated field will be ready the first of the coming week.

Grass continues to be excellent. Grazing in this section of the State is as good as it has been in several years. The shelterbelt was sprayed with lead arsenate for the canker worm that has in places almost defoliated the deciduous trees. The spray was very effective, but was a little late due to delay in equipment.

Maximum temperature 69, minimum 40.

JUDITH BASIN:

Cool, cloudy weather continued during the week, causing grain and forage crops to develop favorably. Following a cool, windy day on the 19th, the wind stopped at night, resulting in a temperature drop to 30 degrees. Beans, corn, potatoes and other tender garden crops were nipped. Alfalfa on the drier areas was also touched by the frost. The low temperature did more damage on the Judith River bottom and low tributary areas.

Judith Basin, continued:

Winter wheat is heading with good yields in prospect. Spring grains are growing favorably throughout Central Montana. Ranges and pastures are improving rapidly and livestock are thriving.

Rye was plowed under in the green manure experiments. Sweet clover was cut on the pasture experiments. All summer fallow plots were cultivated.

Mr. C. S. Noble, large scale wheat farmer of Noblesford, Canada, visited the station. He was particularly interested in cultural methods for winter wheat.

Maximum temperature 83, minimum 30; precipitation, .40 inch.

HUNTLEY:

Torrential rains amounting to 1.00 inch were received during the first three days of the week. Although the percentage of run-off from these showers was high, soil samples taken as soon after the rain as possible, showed the moisture to have penetrated to depths of 5 and 6 inches. The greatest depth of penetration was noted in the rough and cloddy spring plowed plots which have heretofore been too dry to germinate seed uniformly. Much of this seed is now coming through the ground.

Since the rain, minimum temperatures have been unseasonably low, some farmers reporting light frosts. So far as known no crops were injured.

Winter wheat is now fully headed and some varieties are in blossom. Flax plots present all stages of development in the crop from seedlings to plants in bloom. Oats are heading extremely short.

Field work has consisted of weighing the pasture hogs, cultivation of row crops and hand planting of corn where stands were thin.

Maximum temperature 90, minimum 34; precipitation, 1.00 inch.

SHERIDAN:

The weather was partly cloudy and unsettled throughout the week, although there was no precipitation of consequence here. The first of the week was quite warm, but the last few days have been cool. A frost ranging from very light to severe occurred the morning of the 20th in spots over this section of the State. Garden truck and beans were killed in many instances. No frost was apparent on the station.

Sheridan, continued:

Condition of crops continues good, although some contrast is appearing between the different tillage methods with small grain. Sudan grass in the methods of seeding test failed to emerge with a good stand through the hard crust that formed after the heavy rain of June 1, and may have to be reseeded. Sorgo seeded at the same time on similar ground, and Sudan grass seeded at the same time on other soil emerged with a good stand.

Winter wheat began to head during the week. Two early varieties of barley, Vaughn and Flynn, also have begun to head, with a rather short growth.

Alfalfa is being cut to-day, June 22. The rotation plots were plowed for fallow June 17, and fallowing of other ground has been in progress since. The remainder of the corn was cultivated.

Maximum temperature 89, minimum 35; precipitation, .07 inch.

DICKINSON:

Grain crops made rapid growth as a result of plenty of water from previous rains. High winds on two days in the week damaged an increase patch of flax and alfalfa varieties where the plants had recently emerged. The weather has continued cool.

Alfalfa varieties were harvested. The growth was about 18 inches high and the stand generally thick. Grimm and Ladak varieties, grown in rows, yielded approximately twice as much of green weight as in 1928.

Trees were cultivated for the second time. The main weed in the trees was ash seedlings which had emerged in great numbers from the heavy seed crop of last year.

Power requirement tests were run on some of the tillage implements used to cultivate fallow.

Visitors of the week were Mr. R. C. Miller and Mr. McColley, of the Agricultural Engineering Department, North Dakota Experiment Station, and Mr. C. N. Ainslie and Mr. R. L. Shotwell, Bureau of Entomology.

Maximum temperature 84, minimum 41; precipitation, .03 inch.

MANDAN:

Agronomy

The past week has been favorable for all field work. Some crops are showing the need of rain. High winds during the week caused some of the grain to show signs of firing in spots. A few dry spots show up in the alfalfa at the present time.

Mandan, continued:

Corn was given the second cultivation. The 15 acres of fallow in Field P were plowed. Yellow sweet clover and brome grass were cut in the forage crops, and peas were plowed under for green manure.

Maximum temperature 91, minimum 44; precipitation .03 inch.

Cooperative Grazing Experiment

The cattle appear to have put on excellent gains so far this month. The grass in all pastures is in very good shape for grazing; much better than last year at the same period.

Professor Shepperd, of the North Dakota Agricultural College, graded the cattle at the time of his visit to the station on the 21st.

Arboriculture

Mr. E. J. George left Wednesday noon on a short inspection trip. He expects to cover Burleigh, Kidder, Wells, Sheridan, McHenry, Pierce and part of McLean counties in North Dakota, before returning the latter part of next week.

Spraying in the combinations to stop the damage being done by canker worms was continued this week. The seedling caragana were also sprayed the second time June 21. The white elm seed which was picked and planted on June 4 and 5 is up with a fair stand. Hoeing and cultivating continues in the pruning and combination blocks.

Visitors of the week included Mr. W. O. Edmondson, Extension Forester, Laramie, Wyo., Mr. J. A. Munro, State Entomologist, Dean J. H. Shepperd, Chairman of Department, Animal Husbandry, and Mr. A. M. Challey, Field Agent inDairying, all from the North Dakota Agricultural College, Fargo, N. Dak. Professor C. N. Ainslie, located at Sioux City, Iowa, and Mr. R. L. Shotwell, located at Billings, Montana, Entomologists, who are studying the grasshopper problem in this section, and Mr. S. M. Thorfinnson, Smith-Hughes Instructor in Vocal Agriculture, with 19 students from Granville, N. Dak., were also visitors during the week.

Horticulture

The hedges in the testing blocks and on the grounds were trimmed during the week. All species except willows had made vigorous growth, necessitating lopping back from 6 to 18 inches of new growth.

Syringa villosa and Josikea, Mock Orange, roses, -wild, rugosas rugosa hybrids, are at present in bloom on the grounds. The lilacs certainly are wonderful shrubs for the prairie country.

Peonies are also out in bloom at the present time. While loaded with buds,they show the effects of prolonged drought at the present time. Lawns are also drying up, and if rain does not come soon artificial watering will be necessary to save them.

The vegetable fields have been given their second cultivating, following by hand hoeing. The weeds are very abundant, but, due to dry weather prevailing, the hoeing is proving very effective.

Cultivating and hoeing of orchards and small fruits has been in progress throughout the week. Some varieties of plums and crabapples are setting a very heavy crop, and considerable thinning of the fruit will be necessary.

BELLE FOURCHE:

The week has been moderately cool, and only a negligible amount of precipitation was received. An abundance of moisture is still present in the first two feet of soil, and all crops have made a good growth. Sorgo is up, flax and field peas are beginning to bloom, and barley is in the boot. Alfalfa and sweet clover were harvested during the week. The yields of field cured hay were a little over 2 tons to the acre for alfalfa and nearly 3 tons to the acre for sweet clover.

Work in the field has been devoted chiefly to thinning corn, hoeing weeds, and rogueing noxious weeds from plots.

The annual boys' and girls' club camp was held at the station during the week. There were 149 in attendance, making the camp the largest ever held at this station.

Maximum temperature 89, minimum 38; precipitation, .10 inch.

ARDMORE:

The weather during the week was hot and dry with hot winds on two days. Three nights were unseasonably cool with the temperature reaching a minimum of 36 degrees on the night of the 20th.

All small grain other than that seeded on fallow or green manured land showed a serious damage due to the continued drought. Some oats on the more unfavorable locations and those seeded on sod seemed to be beyond more than a partial recovery.

Ardmore, continued:

The harvesting of alfalfa hay was completed on the 21st. The average yield per acre was approximately 1,000 pounds. The plowing of green manure plots was started on the 21st. All corn fields and plots were cultivated for the second time.

The second annual meeting of the various community clubs of Fall River County was held at the station on the 22nd. About fifty people were present.

Maximum temperature 96, minimum 36; precipitation, .09 inch.

CENTRAL GREAT PLAINS FIELD STATION:

Removal of underpinning and roof forms from storage cellar was begun June 17 and completed June 20, the material being hauled to the headhouse for use in forms there.

The headhouse wall forms were finished June 20. The reinforcing steel is in place and all in readiness to pour concrete. The waterline to the headhouse was completed and the ditch filled in and water turned on June 20.

Grading about the barn was carried on through the week, and the court between the implement and packing sheds leveled and surfaced with gravel.

A pasture north of the barn was laid out and work digging post holes and setting posts was begun June 21.

Tractor plowing of the north half of Section 16 was carried on through the week.

Professor E. C. Chilcott left for Hays, Kansas, June 21. He will probably visit Woodward, Oklahoma, and return to this station the last of the month or early in July.

ARCHER: (Week ending June 15 and June 22.)

The weather has been dry with varying temperatures and at times high winds. The latter feature was very marked June 17. The leaves of some plants appeared frosted after the wind. Low temperatures such as to freeze alfalfa occurred June 21 at such places as Rock River. The lowest temperature recorded at this station was 36 degrees on June 18 and 20. The maximum temperature during the last two weeks was 85 degrees.

Archer, continued:

The dry weather is having a marked effect on the early seeded grains. Early seeded barley is burning badly. Small grain crops seeded later are in need of rain. As yet, row crops are not suffering for moisture. Corn is growing much better than last year. The early seeded and the late seeded corn is doing better than that seeded about the middle of May. Winter rye has headed and winter wheat is in boot. Alfalfa and the early grasses are about ready to cut. The alfalfa is exceptionally good. Gooseberries, currants, plums and apples have set on a heavy crop of fruit.

Workat the station has consisted of the cultivation or row crops, cleaning alley and roadways, hauling manure and the construction of a septic tank to take care of the dairy barn and milk house sewage. Hoeing is in progress.

Maximum temperature 85, minimum 36; precipitation .04 inch.

AKRON:

Another week without rain. Small grains on preparation other than fallow are burning badly. Winter wheat on fallow is beginning to burn next to the ground. Sorgos seeded soon after the first of June show but spotted stands.

Field work has been light, but this has furnished opportunity for shearing the sheep and for doing some needed fencing on the land across the railroad. The green manure rye plots were plowed under early in the week and packed. The rye is in full bloom stage. The general forage variety fallow was duck-foot cultivated. The remainder of the sheep were clipped and the wool sacked. The fleeces averaged about 7.5 pounds, only. Other work consisted in preparing and placing indentification stakes on all experimental plots.

To-day, June 22, the wind is from the east and there is renewed hope for rain.

Tamarix Amurense is in full bloom this week.
Maximum temperature 94, minimum 36; precipitation, 0.

NORTH PLATTE:

Corn on the D. L. A. project was thinned and cultivated. Potato rotations were sprayed and cultivated.

North Platte, continued:

Small grain is beginning to show the effects of the continued dry weather but corn is making very rapid growth.

Some time was spent in preparing the station grounds and fields for the annual Field Day which will be held June 27.

Maximum temperature 93, minimum 46.

COLBY:

Temperatures ranged somewhat higher during the past week than previously. Wind velocity was also rather high. A few plots of barley on the project show some effects of the rather severe conditions. Other small grains do not show any signs of damage. Corn has made a very rapid growth.

The annual field day was held Wednesday and a good crowd was in attendance in spite of the busy season. Director Call and Professor Fitch of the main station were here that day and appeared on the program.

Field work consisted of spring tooth harrowing fallows, throwing out ridges on listed corn and plowing some late fallows.

Mr. C. O. Johnson was a station visitor yesterday, the 21st, and took notes on the rust nursery.

Maximum temperature 96, minimum 47; precipitation, 0.

GARDEN CITY: (Week ending June 15.)

All planting of row crops was finished on Monday, the 10th. Practically all sorghum crops planted last week are up and emergence notes have been taken.

Hot winds started on Tuesday, the 11th, and the remainder of the week was very hot and dry with a small amount of precipitation on the night of the 13th. Hot winds and high temperatures have hastened maturity of the wheat a great deal. Some plots will probably be cut in yield and a great deal on account of the hot weather.

The Agent in charge left for Manhattan, Kansas, Tuesday morning to attend the meetings of the American Society of Agronomy on Wednesday and Thursday. Thursday afternoon a trip was made by automobile from Manhattan to Hays, Kansas, where the remainder of the program was held on Friday.

GARDEN CITY, continued:

A large part of the Friday morning program was held on the DLA station at Hays where very interesting experiments were being conducted on tillage methods for wheat seed beds. Saturday the Colby branch station was visited on the way back to headquarters at Garden City. Mr. Coles the superintendent at Colby was getting ready for a field day to be held June 19.

Maximum temperature 96; minimum 50; precipitation .06 inch.

GARDEN CITY:

Work was started on thinning the May 15 date of planting sorghums Monday, the 17th. Cultivation and hoeing of weeds out of alley ways was started. The second date of planting of cowpeas and soybeans was done on Monday, also the third date of planting of sorghums.

Plot ends of row crops were trimmed the past week. General thinning of row crops is in progress at the present time.

Some wheat plots on the poorer methods of seed bed preparation will be cut as soon as possible next week. The high temperatures the past two weeks; accompanied by high winds have matured wheat very fast. Some will be shriveled and likely of poor quality. By the last of June all wheat should be cut.

Cultivation of row crops is in progress now.

Maximum temperature 101; minimum 54; precipitation none.

HAYS:

The weather was dry, hot and windy the fore part of the week, cool and partly cloudy during the last few days of the week. Maximum temperature 98, minimum 48. No rain.

A heavy south wind started moving June 15 and continued for three days, accompanied with maximum temperature of 98 on two days.

HAYS, continued.

Previous to the windy weather mentioned in previous paragraph, all crops had made better than normal growth, and were capable of making yields much above average with just average weather to the close of the season. However, the three days of wind completely changed the picture. The best winter wheat plots which could easily make yields of 40 bushels will now do well to make 25 to 30 bushels. On these plots the wheat now appears to be mature and ready for combine harvesting, but as a matter of fact while the straw in many cases is dry and brittle the grain is still soft and will shrink a good deal not only making a light yield but a light quality grain. On the other hand, some of the wheat on other plots which could not have made more than 10 to 15 bushels was burned less and will yield nearly as much as if the wind had not occurred. However, in spite of this, some very good yields are expected.

Oats and barley crops were also damaged, but not so severely as these crops were more nearly mature, expecially the barley. These crops are now being harvested. Spring wheat suffered perhaps more than other small grains, it being considerable later and burned badly.

All feed crops are doing nicely. None of these suffered from drought as there is plenty of moisture in the soil for present requirements. Corn now has seven and eight leaves, kafir five or six leaves. Perhaps this is as good way as any to indicate its stage of growth.

Although there is a good stand of alfalfa on the old or sod plots, the growth was very thin and short. It was about one-third in bloom and beginning to dry off when cut June 14, and made slightly more than one-half ton yield. Brome-grass sod plots made only a spreading growth with few scattered seed stalks. There was scarcely enough of this to rake after mowing. New stands of alfalfa and brome are both good but they are showing effects of dry weather.

Canada field peas which had made a growth of 24 to 30 inches and stood about 22 to 24 inches high were turned under for green manure June 15.

HAYS, continued.

The American Society of Agronomy, which convened in Manhattan for two days, spent Friday, the 14th, on the Fort Hays Experiment Station. Attendance about 60. The 15th was "Farmers Wheat Day" program on the Station. About 200 were present. On June 21 the station was visited by a "Travel School" from North Carolina. One hundred and twenty professors and students in this party are traveling in busses and automobiles. All these parties spent some time on the Dry Land Project. Among other visitors in smaller parties during the week were E. C. Chilcott, Principal Agriculturist in charge of Dry Land Agriculture, Washington, D. C., and Mr. E. F. Chilcott from Woodward Field Station.

TUCUMCARI:

Several days of hot wind proved very severe on all crops the past week. Although the moisture below the surface foot is satisfactory, the top soil is very dry and rain is badly needed. Wheat harvest is starting earlier than was expected and farmers report much light, shrunken grain.

The last date of grain and forage sorghums has been planted, the lister being used to place seed in moist soil. Considerable increase land has been planted in the same manner. Practically all plot and increase land planted before June 10 has been cultivated. In spite of drought and periods of high wind, the majority of crops seem to be growing fairly well, although blowing has occurred on limited areas.

Cherries have been picked throughout the week, the last of the crop being recorded to-day. Yields were high and quality was good. Small trees not over ten feet tall and that distance in diameter produced from 75 to 100# .

Maximum temperature 101; minimum 56; precipitation .0.00.
Wind velocity 7.5 miles per hour; evaporation 3.091 inches.
Precipitation since May 11, 0.70 inch.

DALHART:

No precipitation was received during the week. The wind velocity was rather low most of the time. The days for the most part were quite warm. Friday, the 21st, was the hottest day of the week with a temperature 99 degrees. The precipitation for the month of June to date is only 0.84 of an inch. The maturing crops (rye and wheat) are drying quite noticeably to maturity. Rye will do to harvest the first of the week. The winter wheat will also do this coming week. Reports reach the station that many fields of wheat are drying too rapidly for a good quality of wheat. It is not now felt that the wheat on the station will be severely injured by the lack of June precipitation and by the drying weather the past week.

Sorghum thinning occupied the thinning crew all week. So far the boys doing the thinning are just about thinning as fast as the different dates of seeding are ready for thinning. The corn was thinned the first of the week.

Knife weeding and cultivating have been done each day of the week. Crop growth, of the row crops, has seemed to be quite retarded. There seems to be a tendency for the earlier sorghums to start more rapid growth the last days of the week.

The later cherries were all picked during the week.

Maximum temperature 99; minimum 52; evaporation 2.380 inches. Wind velocity 6.3 miles per hour.

LAWTON:

Hot, dry weather continued throughout another week, permitting field work to be rushed along in good shape. Small grain harvest was completed June 21, a very late date for this section of the State. Cotton was also chopped and given two cultivations during the week. Cotton, cowpeas, and grain sorghums planted about June 10 have not yet emerged, due to the rapid drying of the surface soil. Row crops wilted to some extent when the maximum temperature ranged from 95 to 98. A gentle rain would be of immense value to growing vegetation of all kinds.

LAWTON, continued:

Eight tons of alfalfa were baled and stored in the barn. Two-year old sweet clover yielded from 2600 to 5400 pounds of cured hay per acre, with an average of 3975 pounds.

On a drive of 100 miles southeast of Lawton within a radius of 35 miles on June 23, it was observed that small grain harvest was pretty well completed. Mixed farming obtains in this territory and but few fields had been or were being combined. Cotton fields, as a rule, were quite weedy but were rapidly being cleaned. Cotton is generally late and plant growth is yet quite small. Many fields indicated rather poor stands. Only two fields were seen that were normal in growth for the present date. Feed crops plainly show a need of rain in most fields.

Maximum temperature 98; minimum 68; precipitation .15 inch.

BIG SPRING:

Dry, hot weather has prevailed during the past week. Although some early planted feed crops are showing signs of dry weather, crops in general over the county are making a good growth. Only .25 inch of rain has been received during the past thirty days. This is very much below the average for this time of the year.

Thinning of cotton and sorghum plots has continued during the entire week. All cotton plots, all grain sorghum varieties, and all kafir and corn plots in the rotations have been thinned. Winter wheat plots were threshed, or rather run through the thresher, during the week. Yields obtained ranged from failure to 4 bushels per acre.

Maximum temperature 99; minimum 67; precipitation 0.

WOODWARD:

The weather has continued dry and hot during the past week, and has been exceptionally windy on several days.

Due to the hot, dry weather wheat over the county ripened rapidly and considerable harvesting was done during the week. Most of the wheat harvesting in this part of the country will be finished next week. Rowed crops that were planted on well prepared land have been making a good growth, but rain is needed badly. Considerable soil blowing was observed in some fields of rowed crops that were well tilled.

Station work for the week consisted of harvesting wheat and rye plots, planting corn, hoeing and watering nursery and trees, spraying cedars and vines, mowing alfalfa, hoeing and thinning cotton, and picking cherries, plums, peaches, and berries. Sorghum plots on the Cereal Project were springtoothed, and some of the Cereal sorghum plots were thinned.

Maximum temperature 96; minimum 66; precipitation 0.0
Wind velocity 10.4 miles per hour; evaporation 2.769 inches.

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WEEKLY STATION REPORTS

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DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 29 1929

REPORT FOR THE WEEK ENDING JUNE 29, 1929.

PENDLETON:

The past week has been rather warm. The winter wheats are ripening rapidly. The winter barleys in the cereal nursery were harvested this week. The work on the station the past week has consisted mainly of cutting and shocking wheat hay.

Director J. T. Jardine, of the Oregon Experiment Station, was a station visitor June 28. While he was here the contract for the construction of the station superintendents residence was signed. Construction work on the house will begin not later than July 10.

Maximum temperature 96; minimum 40; precipitation none.

HAVRE:

The past week has been mostly dry and unusually hot. It was a favorable week for field work and for the growth of corn and sorghums. The small grains, however, which looked very promising suffered very materially. Spring wheat which had headed out only a few days before is now almost ready to harvest on all but the fallow methods. Barley, too, ripened prematurely and will be considerably shriveled, except on fallow. All the barley plots except the fallow were harvested Saturday. Most of the continuous cropping winter wheat plots are almost ready to cut. The grain on these will be shriveled and the yield will be considerably less than promised a week ago. The winter wheat on fallow headed considerably later and is apparently holding its own as it is still very green except the basal foliage. Moisture samples at the beginning of the week indicated that most of the continuous cropped plots are out of moisture the entire six foot depth, while the fallow plots still have some but not an abundance. A quarter inch of rain did not check the ripening, nor the heat.

A group of Agronomists and Farm Managers of the State Grain Corporation from Moscow, Russia, visited the station Thursday, June 27. They were touring the country in automobiles. Professor E. C. Chilcott and Mr. E. F. Chilcott spent a part of Sunday, June 23, visiting the station.

Maximum temperature 102; minimum 53; precipitation .266 inch.

JUDITH BASIN:

The fore part of the week was cool and cloudy with a shower the first of the week while the last two days were very warm with a maximum temperature of 92 degrees occurring on the 28th.

A good rain is needed badly at this time. Moisture received in June totals 1.86 inches to date as compared with the 20-year average of 3.23 inches for this month.

All winter wheat is headed with the exception of the later dates of seeding. Spring grains and forage crops made good growth during the week but indicate that the available soil moisture is quite badly depleted.

Alfalfa hay in the west field and alfalfa and sweet clover hay in the hog and cattle pastures was harvested during the week. The sweet clover varieties in the forage project were also harvested. The shelter-belt experiments were given a duckfoot cultivation.

Dr. P. A. Young, of the Montana Experiment Station, was a station visitor during the week. Dr. Young studied the prevalence of foot rot in this section.

Maximum temperature 92; minimum 38; precipitation .39 inch.

HUNTLEY:

Good growing weather has prevailed throughout the week and all crops have made considerable advancement. Showers of the past few days have brought the rainfall for June a trifle above the 19-year average for this station, but the total precipitation since the first of April is still nearly two inches below normal.

All small grain crops are now fully headed and many of the earlier plants are in bloom. Corn replanted by hand a week ago is beginning to come up and stands of Sudan grass and sorgo are getting thicker through the late germination of seed that has been in the ground for about a month.

HUNTLEY, continued:

The cultivation of row crops was finished early in the week and all fallow plots were duckfooted.

Maximum temperature 97; minimum 40; precipitation .55 inch.

SHERIDAN:

The week was mostly fair and the last few days have been quite warm. Conditions have been almost ideal for haying, which has been in progress on the dry land of this section all the week. All alfalfa on the station was cut early in the week, with the exception of some in the ravines where mixed with grasses. The hay cured in good shape and dry weights have been secured on all the plots, with less delay than usual because of weather conditions. The yield in the rotations was 2050 lbs. to the acre from the plot the second year from seeding, and 4600 lbs. to the acre for the third year from seeding. Yields in the varieties, close seedings, ranged from 3400 lbs. to the acre by Chubut, to 4860 lbs. by Grimm and 5120 lbs. by Ladak. With the exception of Chubut, difference in yield of the different varieties was small.

Plowing for fallow and green manure has been completed, with the exception of the peas in the rotations. Moisture was still evident at the plowing depth where a heavy stand of sweet clover was turned under. Some firing was evident with spring grain yesterday, the 28th. Barley is heading, some plots being fully headed, while oats in the rotations are just beginning to head.

Maximum temperature 90; minimum 39; precipitation .18 inch.

DICKINSON:

Most of the week was cool and dry. A high wind on Thursday, the 27th, damaged crops by use of water and injury from whipping the foliage. Grains made good growth but will soon show need of rain.

Alfalfa varieties were cut early in the week and the increase patches were cut and stacked. About a fourth of the hay was stacked before the high wind on Thursday and this was of excellent quality.

DICKINSON, continued:

That which was in the shock on Thursday was damaged by dust settling in the shocks. Corn on the rotations was cultivated. Rye and sweet clover in green manure plots were plowed.

Dynamometer tests showed that considerably more power was required to plow sweet clover than to plow rye.

The doors and windows of the brick house were weatherstript on the 29th.

Visitors during the week included Messrs. R. C. Miller and H. F. McColly, of the Agricultural Engineering Department, North Dakota Experiment Station, R. L. Shotwell, Bureau of Entomology, and Albert Osenbrug, Associate Agronomist, Office of Dry Land Agriculture, Newell, South Dakota.

Precipitation to date in June is 2.89 inches.
Maximum temperature 81; minimum 41; precipitation .03 inch.

MANDAN:

Agronomy

The week has passed without rain of any value. The forepart was cool but the latter half warmed up. A very high wind blew on one day.

Most of the week was spent in cultivating, hoeing row crops and putting up hay. Yellow sweet clover and brome-grass in the plots were hauled in. Haying started in the larger fields. Part of the hay will be hauled in to-day, and the 27 acres in Field P will be nearly all cut and cocked to-day. The yield of hay will be fairly good, but the alfalfa has started to dry up badly in spots. The total yield will be reduced because of light rainfall during June.

Small grains are still looking fairly well, but many of the plots show the effect of drought, especially those on fall plowing.

MANDAN, continued:

Agronomy, continued.

The rainfall for the month to date is over two inches below normal for June.

Maximum temperature 82; minimum 39; precipitation .21 inch.

Cooperative Grazing Experiment

The grass is starting to dry up in spots in most of the pastures. The cattle will soon be short of feed in the smaller pastures, unless a good rain comes soon. They appear to have put on good gains during the month.

Arboriculture

All roadways and alleys have been duckfooted. Hoeing has been done in the poplar cutting block and species testing blocks. Conifer seed beds have been weeded. The conifer nursery has been irrigated.

Mr. E. J. George returned on the 18th from a shelterbelt inspection trip in North Dakota, east of the Missouri river. He reports stands in new 1929 plantings excellent, with the exception of Chinese elm, which is practically a complete failure.

Arrangements have been completed for three inspectors to leave the station July 1. Mr. J. L. Emerson will travel through South Dakota and Wyoming, Mr. H. F. Borresen through North Dakota and eastern Montana and Mr. E. J. George through western Montana.

Horticulture

The nursery is now being irrigated in order to "size up" material for budding. Due to dry weather, nursery stock has been making a weak growth.

Thinning of plums and some crabs is now in progress. Native varieties have set a heavy crop and will require considerable thinning.

MANDAN, continued:

Horticulture, continued.

The first hoeing of orchards and small fruits is almost completed. Hoeing has also been in progess in the gardens and on the grounds.

Peas are now being harvested from the acre garden.

The lawns were irrigated during the week.

Visitors of the week included Mr. Albert Osenbrug, Newell, South Dakota.

BELLE FOURCHE:

The past week has been moderately warm, and numerous light showers have occurred. A heavy storm of .70 inch precipitation was received June 26, and considerable hail fell, but as no wind accompanied the hail very little damage was done.

All crops have made an exceptionally rapid growth, and the reserve moisture in the soil is being rapidly depleted, but none of the crops, as yet, show signs of suffering from lack of moisture. Oats and barley are beginning to head, and spring wheat is in the boot. Flax is nearly in full bloom. Brome-grass was cut for hay.

Maximum temperature 85; minimum 40; precipitation 1.02 inches.

ARDMORE:

The weather during the week was hot and dry. Showers on the 22nd and 23rd were beneficial to crops that were not too badly damaged by drought to recover but the moisture from these showers lasted only a few days.

All small grain crops including those seeded on fallow were showing further drought damage by the end of the week. Small grain crops seeded on sod seemed to be damaged beyond any hope of recovery and small grain after small grain was judged to have a possibility of only a light crop at best.

ARDMORE, continued:

Corn, beans and potatoes made a rapid growth during the week. Sorgo made rapid growth when moisture was present in the top soil in sufficient amount to start plant growth.

Field work consisted of cultivating corn and sorgo fields, disking and duckfooting roads and shelterbelts, and repairing fences.

Maximum temperature 95; minimum 50; precipitation .79 inch.

CENTRAL GREAT PLAINS FIELD STATION:

The two-car garage in the rear of the Superintendent's residence was sheathed, shingled and half the cement floor was run on June 24 to June 29. A four-car garage in the rear of the office was framed, sheathed and shingled on June 25 to June 28. Doors and windows are still to be placed in these buildings. Footings were run for the garage at the rear of the messhouse.

Fence posts were set for the cow pasture and sufficient to permit stringing two wires along the west edge of the horse pasture; the pasture is now in use for the station horses. A tight board corral, five and a half feet high is practically completed at the west end of the barn.

A carload of cement was received on June 29. Another half-batch cement mixer has been obtained for the station, and weather permitting the two mixers will run the basement walls of the headhouse on July 1.

Grading about the barns, implement shed and storage cellar was continued through the week.

Tractor plowing of Section 16 was continued through the week.

Insects did considerable damage to cabbage plants in the vegetable garden the past few days. Rain is needed but the peas, beans and root crops appear to be coming along well, as is the case also in the tree nursery.

CENTRAL GREAT PLAINS FIELD STATION, continued:

Brig. General C. R. Howland, Commanding Fort D. A. Russell, called at the station June 29, in connection with cooperative work in tree plantings about the Post. Superintendent Wilson attended a conference at the Fort to discuss details.

Mr. W. L. Quayle, Director of Experiment Farms, Wyoming College of Agriculture, visited the station June 29.

Maximum temperature 89; minimum 43; precipitation 0.

ARCHER:

The weather has continued dry and warm with considerable wind. The temperature was 94 degrees to-day, June 29. However, the first signs of a break in the dry weather occurred to-day when the sky became partly cloudy and local showers appeared.

Due to the dry weather all crops are in need of rain. This is especially true of winter grains and early seeded spring cereals. These crops are burning badly. Corn, which has made good growth, began to roll to-day. Beans show the need of moisture. Alfalfa and hay grasses are burning. The pastures are becoming very dry. This factor has reduced the milk flow of the dairy herd.

Work at the station has consisted mostly of weeding. The trees have all been hoed and cultivated. The last of the manure has been hauled. Rye in the dairy field has been cut and raked. A cement septic tank for the dairyman's house has been constructed.

Maximum temperature 90; minimum 38; precipitation 0.

AKRON:

A rain and hail of varying intensity was received throughout this region last Sunday. Here at the station a hard beating rain totaling .54 of an inch, with just a trace of hail, was received. At other points near here hail of sufficient intensity to seriously damage headed crops was received. The entire week has been blustery and threatening but with no more rainfall here at the station.

AKRON, continued:

On Friday, June 28, a storm approached from the east but we received only dust. In the Hyde Community some twenty miles east of here the same storm delivered devastating hail.

May passed with only 1.19 inches of rainfall and to date June has produced only .81 of an inch. This promises to be the severest May and June drought ever experienced within the history of the station. The breaking of total, and distributed rainfall records since 1920 has been the rule rather than the exception. Many are wishing for the return of the type of conditions experienced from 1908 to 1920.

The pea, sweet clover, and the sod plots were plowed and packed during the week. Also Plot N of the Methods of Fallow Series. Peas had suspended growth at a height of from 8 to 14 inches and at the time of plowing under were severely burned. The rotation fallow and green manure rye plots were spring-tooth-harrowed for the first time since they were plowed; the purpose being to break the light crust formed by the hard beating rain of the fore part of the week. The surface planted corn plots were cultivated for the second time, the corn at this time is standing about ten inches high. The listed silage corn was cultivated for the first time. The weed proving expecially troublesome in the corn plots this year is the one commonly referred to as the Skeleton Weed.

The second and the third replications of the Rate and Spacing Corn Experiment were thinned to specified stands where possible during the week. In many cases there were not enough plants present to thin to the specified stand. The Corn variety Experiment was thinned to uniform stands where possible. In several cases there were not 60 plants to the plot which was the uniform stand decided on. The first replication of the Rate and Spacing Corn Experiment has not yet emerged. The seeded sorgo plots were spike-tooth-harrowed down the rows with a special listed-corn harrow in order to break the crust and encourage emergence. Other work consisted of hoeing weeds. The Russian Thistle is making good progress despite the lack of rainfall.

AKRON, continued:

On Tuesday a delegation of Lincoln County farmers and wives to the number of approximately 60 individuals under the leadership of County Agent Gilbert paid the station a visit. These people were chiefly interested in fruit trees, windbreak trees and in shrubbery, and in the hog and sheep pasturing experiments.

On Friday a delegation of Weld and Logan County farmers and wives to the number of approximately 120 individuals under the leadership of County Agents Simpson of Weld County and Morrison of Logan County visited the station. The interest of these people was almost exactly that of the Lincoln County delegation but with the trench silo added.

On Saturday a delegation of the Northeast Colorado Editorial Association meeting that night at Akron, paid the station a visit.

Richmond and Timme Cherries are turning.

Practically all small grains are in head. Barley is ripening rapidly.

The past two weeks have been especially hot and disagreeable.
Maximum temperature 97; minimum 47; precipitation .54 inch.

NORTH PLATTE:

Weather continued hot and dry during the past week. Corn on the D. L. A. project was cultivated during the week.

The annual Station Field Day was held on June 27 and was well attended. There were between 450 and 500 people present.

Small grains are rather badly in need of water but corn is looking good as yet.
Maximum temperature 102; minimum 41.

GARDEN CITY:

Thinning of sorghums was completed the fore part of the week. General cleaning up, cultivation of alleyways and roadways and hoeing weeds took about two days. On June 26 the early ripened wheat plots were cut. All wheat plots were cut by the end of the week.

Wheat ripened fast and somewhat earlier this year than normally. Hot winds and dry weather the last three weeks ripened it fast. Most plots have a heavy straw growth on them but many, especially where the poorer methods of seed bed preparation were used, will produce a light yield and of rather inferior quality.

Sorghums are making a good growth. Seed beds having row crops on them have plenty of moisture stored to give the crops a good start. Drilled sorghums on the seed bed preparation plots were planted on Thursday, June 27, of this week. On Monday, June 24, .75 inch of rain fell which wet the surface of the ground to about two inches, making an ideal seed bed in which to drill sorghums.

The days have been hot with some wind but the nights cool. Maximum temperature 97; minimum 54; precipitation .75 inch.

HAYS:

The weather has been dry and hot, temperature ranging between 47 and 99 degrees, the minimums the last few days hanging round from 60 to 70. No precipitation.

After the few days of hot winds reported previously a few days of cooler weather retarded the "drying up" of the wheat, but the last two or three days harvest has been coming rapidly. By Monday of next week, July 1, all wheat in this section will be dry enough for combine harvesting. Headers, a few combines with winrow attachments have been running and a few combine threshers are in action to-day.

The station has commenced on commercial fields, and the Cereal Project has been harvesting with the binder several days.

HAYS, continued:

Oats and barley on the Dry Land project have been in the shock a week or more, and to-day the eight foot plot combine was started on the wheat plots for a short day run. Monday morning this combine will commence running from the time combining can be started in the morning until late in the evening each day until the harvest is finished.

In spite of the fact that the grain is shriveled and light the yields are running better than was expected, after the wheat was so burned by winds. From the 38 plots harvested to-day the yields ranged from 19 to 36½ bushels per acre. Only two yielded less than 25 bushels. There will be some lower yields threshed and it is believed the highest yields have not yet been threshed.

The plot combine was inspected to-day while in action by President Ferrell and Dean Call, Kansas State Agricultural College, and Professor E. C. Chilcott, Principal Agriculturist in Charge of Dry Land Agriculture and Mr. E. F. Chilcott, of the Woodward Field Station, Woodward, Oklahoma.

All row and feed crops are wilting slightly and would take a little rain, but are not yet suffering.

TUCUMCARI:

Thinning plots, cultivating, threshing small grains, and watering trees have been the main activities the past week. The majority of crops are making fair growth, considering the severity of the drought, but it has been impossible to complete increase planting; the greater part of the unplanted land is to be broadcast to sorgo or Sunrise kafir. Early stands are generally satisfactory, while the last planting of both plots and increase is at present somewhat spotted, for only partial germination occurred in some instances, due to dry seed bed.

MC wheat and rye were cut June 15 and threshed June 28, with following yields and tests per bushel:

	Wheat		Rye	
	Acre yield	Test	Acre yield	Test
MCA--late plowed	12.5	64#	11.3	59#
B-- early	18.5	64½	18.4	59
D--on fallow	20.3	64	23.8	58½

TUCUMCARI, continued:

Harvest on the plains is in full swing, with yields averaging higher than was expected. While reports of 25 bushel yields are received, it is probable the county average will run about 15 bushels. The price is ranging near 90 cents.

Maximum temperature 102; minimum 56; precipitation .03 inch.
Wind velocity 5.8 miles per hour; evaporation 2.420 inches.
Precipitation June to date .27 inch.
Precipitation since May 11, .73 inch.

DALHART:

Two rains the first of the week with a total of 2.07 inches of precipitation furnished some very much needed moisture. Many farmers are bemoaning the fact the heavy rain came. This heavy rain, 1.65 inches on Sunday night, June 23, washed many lister furrows almost full of sandy soil so that where the milo and kafir were small the plants were covered up in many cases. Quite a number of people are replanting. It was necessary to replant the listed plots of milo on the station, and one listed plot of kafir due to the rather haphazard stand which was left. Replanting was done with the minimum of the old destroyed. The row crops, especially those that had gotten started good, have made wonderful progress during the week. Corn has made unusual growth the past week. The corn is now past knee high while last week it was from six to eight inches high. The first date of seeding sorghums has likewise made wonderful growth this past week.

It was not sufficiently dry enough to do any field cultural work until Friday afternoon, June 28. All fallow plots were cultivated and a start was made at cultivating the row crops. Other field work consisted of the harvesting of the wheat, oats, barley, and rye. There still remains a small area of furrow wheat to harvest which was not ripe enough to harvest to-day but should do by Monday. Wheat and rye are quite good. The oats are good with the exception of that seeded on sorgo ground.

DALHART, continued:

Thinning was continued for four days of the week. The big bulk of the thinning is done. There still remains some seventy plots to thin. The posts for the North line fence were reset according to the survey the first of the week. Just half of the wire was strung, leaving the rest until some necessary field work can be done.

Maximum temperature 93; minimum 56; precipitation 2.07 inches. Wind velocity 6.2 miles per hour.

BIG SPRING:

A light sprinkle is falling at the present writing, but during the rest of the week the weather has remained hot and dry. All crops seem to be growing very well in spite of the apparent dry condition of the soil.

Thinning and cultivating has occuppied the time of the station force during the entire week. All plots have been cultivated and nearly all of them thinned. About another days work should complete the thinning of all plots with the exceptions of the June 15 and July 1 dates of planting.

Maximum temperature 103; minimum 70; precipitation 0.

LAWTON:

Row crops, with the exception of cotton, made satisfactory growth the past week. A rain of .88 inch on June 23 greatly benefited vegetation of all kinds. Growth of cotton continues to be retarded and the crop is very small. Thinning of grain sorghums and cotton was completed and all crops were again cultivated. Emergence of cotton, cowpeas, and forage sorghums, planted about June 10 was improved by the rain on the 23rd.

Threshing of rotation wheat plots began June 28. Except on a few plots the yields are rather light and the grain is of rather inferior quality.

LAWTON, continued:

Common feterita and Dwar Hegari are already showing considerable chinch bug injury.

The grape crop has been very sharply reduced by Black Rot. Practically all varieties are affected to some extent. Ellen Scott will fail almost entirely.

Maximum temperature 96; minimum 58; precipitation .88 inch.
Total precipitation for June 1.94 inch; normal 3.71 inches, deficiency 1.77 inches.

WOODWARD:

A rain of .42 inch occurred the night of Sunday, June 23. The week has been hot and dry, and harvesting of wheat over the country has progressed at a rapid rate. Rowed crops are growing nicely, but are needing rain.

Station work for the week consisted of planting soybeans, milo, broomcorn, and cowpeas. Corn on the plots and variety experiments was cultivated, and cotton was thinned. Alfalfa hay was harvested, and sorghum plots on the Cereal Project were planted and thinned and cultivated. The last of the cherries were picked and some peaches and berries were also picked. The orchard and vineyard were sprayed and the orchard and windbreaks were hoed.

Maximum temperature 100; minimum 58; precipitation .42 inch.
Wind velocity 7.4 miles per hour; evaporation 2.225 inches.